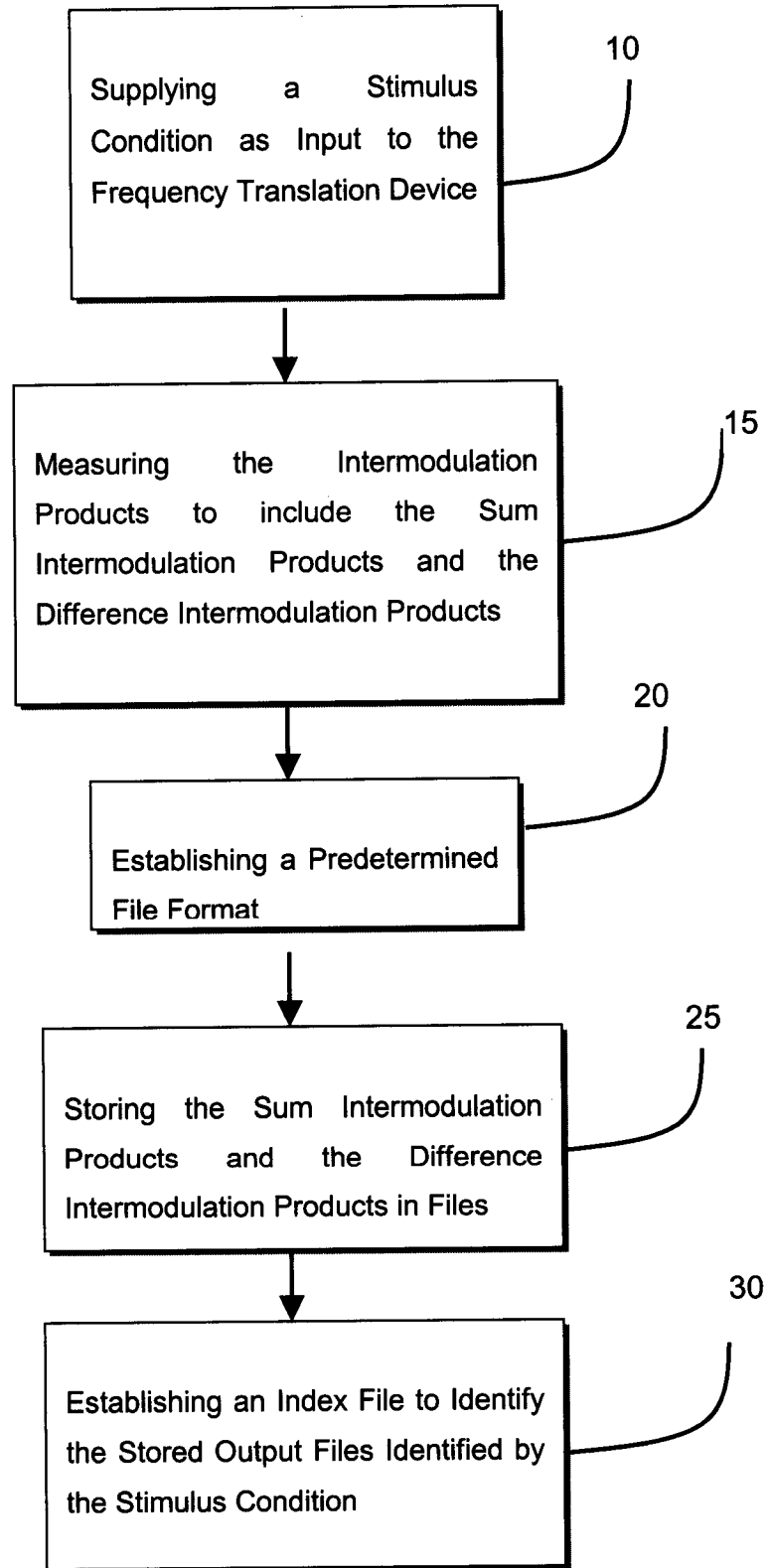


Fig. 1



[illegible]

Fig. 3

```
VAR RF_Frequency_value(1)=915000000
VAR RF_Power_value(1)=-20
VAR LO_Frequency_value(1)=985000000
VAR LO_Power_value(1)=-1.110223E-16
VAR UpperSB(0)=1
BEGIN IM_Table
%Index(0)  ConverLoss(1)  IMT_filename(2)
1 0.3936  SLCR_P_Lower_1_-20.txt
END
55
VAR RF_Frequency_value(1)=915000000
VAR RF_Power_value(1)=-20
VAR LO_Frequency_value(1)=985000000
VAR LO_Power_value(1)=-1.110223E-16
VAR UpperSB(0)=0
BEGIN IM_Table
%Index(0)  ConverLoss(1)  IMT_filename(2)
1 0.2360  SLCR_P_Upper_1_-20.txt
END
```

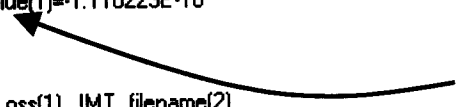


Fig. 4

60

RFLO	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
0	12	23	44	53	67	78	65	87	86	99	99	99	99	99	99	99	15
1	32	0	66	75	86	95	99	99	99	99	99	99	99	99	99	99	14
2	23	43	54	99	99	99	99	99	99	99	99	99	99	99	99	99	13
3	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	12
4	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	11
5	99	99	99	Subtract			99	99	99	99	99	99	99	99	99	99	10
6	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	9
7	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	8
8	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	7
9	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	6
10	99	99	99	99	99	99	99	99	99	Sum			99	99	99	99	5
11	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	4
12	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	3
13	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	23	2
14	99	99	99	99	99	99	99	99	99	99	99	99	99	65	10	32	1
15	99	99	99	99	99	99	99	86	87	65	78	67	53	44	23	12	0
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0	RFLO

65

Fig. 5

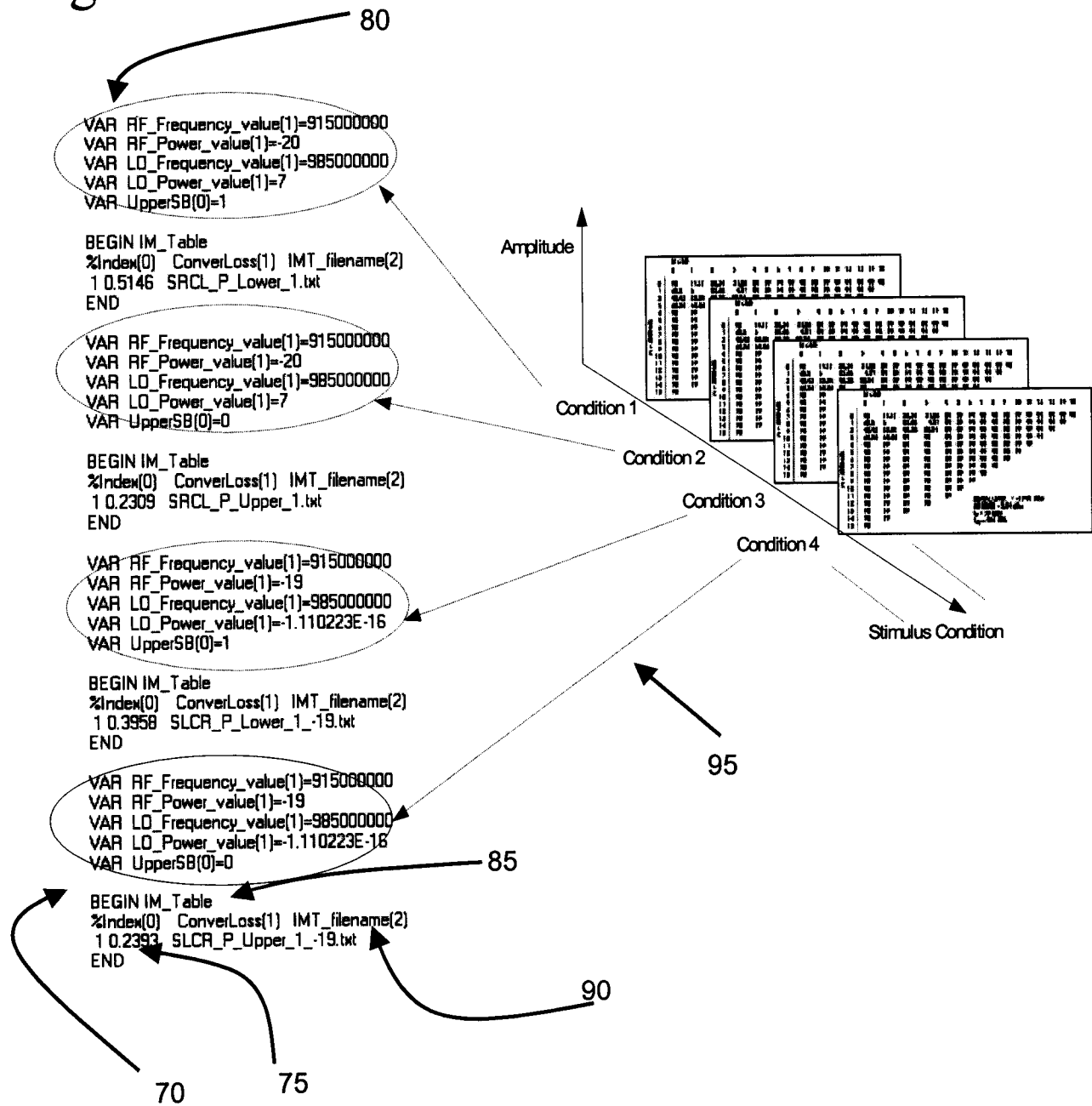


Fig. 6

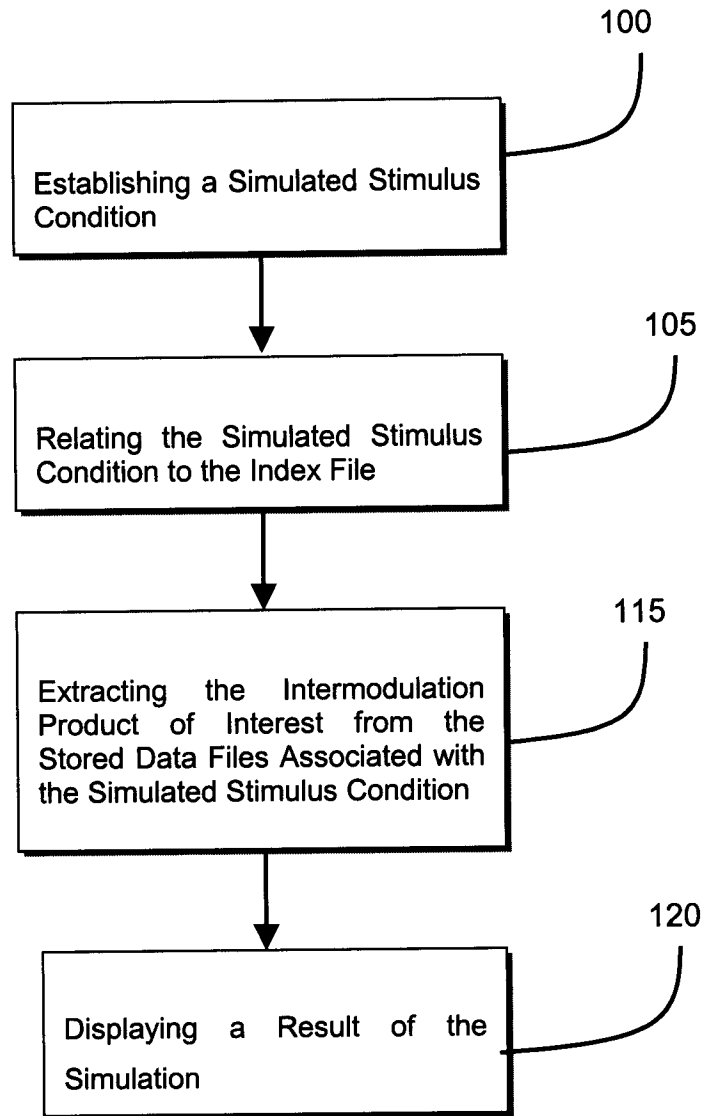


Fig. 7

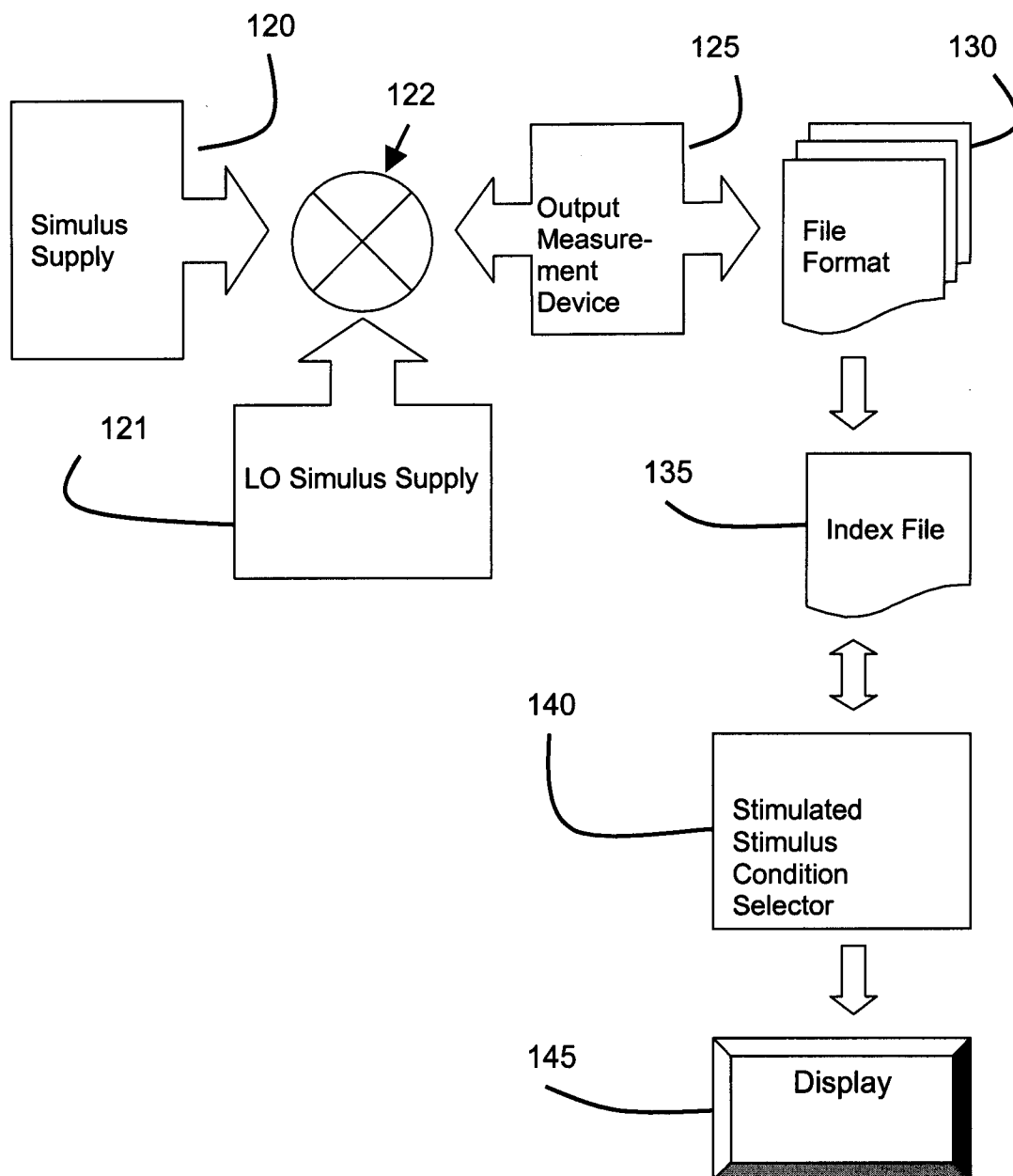


Fig. 8

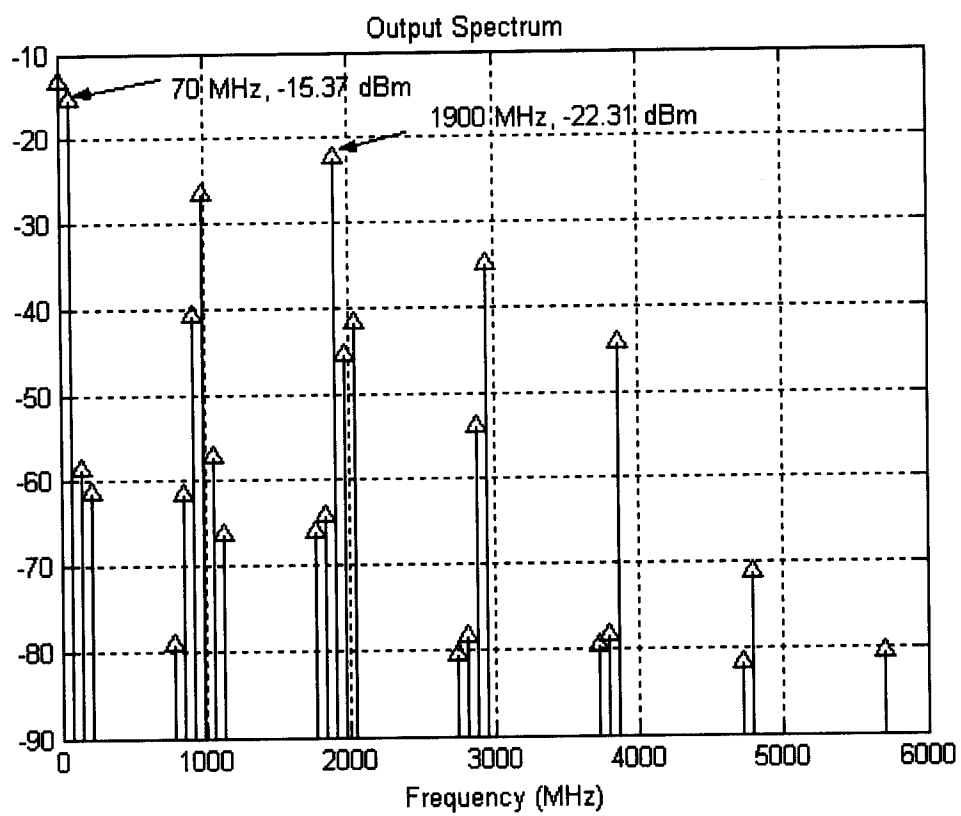


Fig. 9

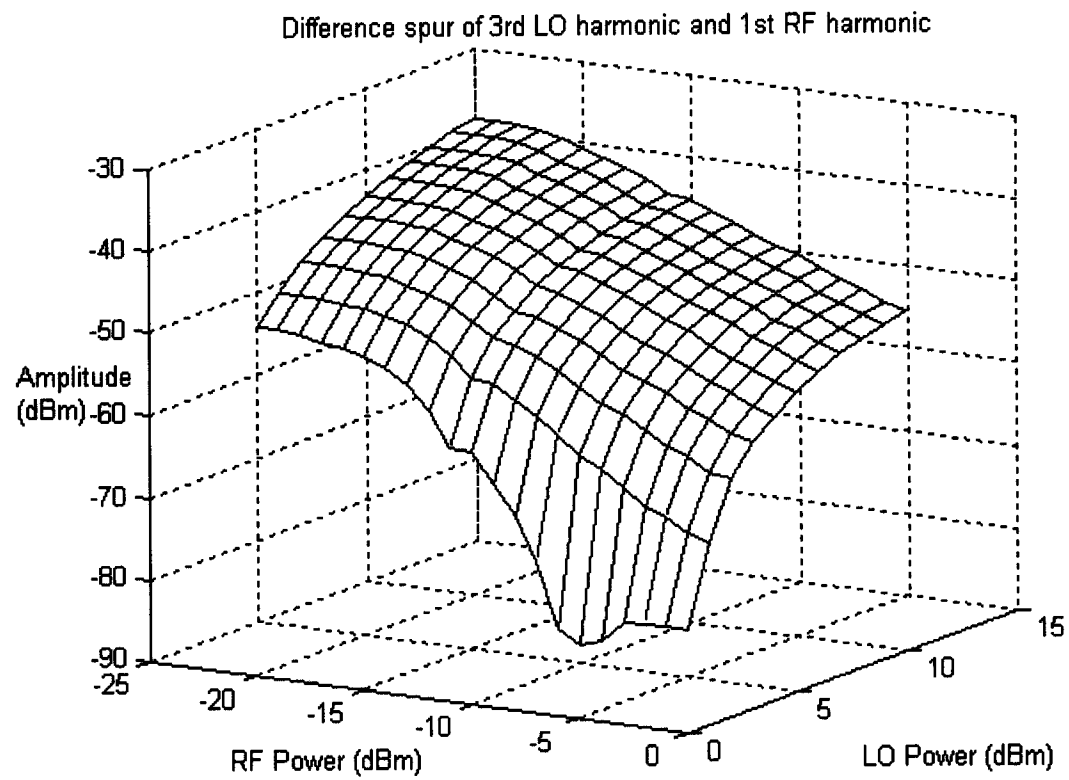


Fig. 10

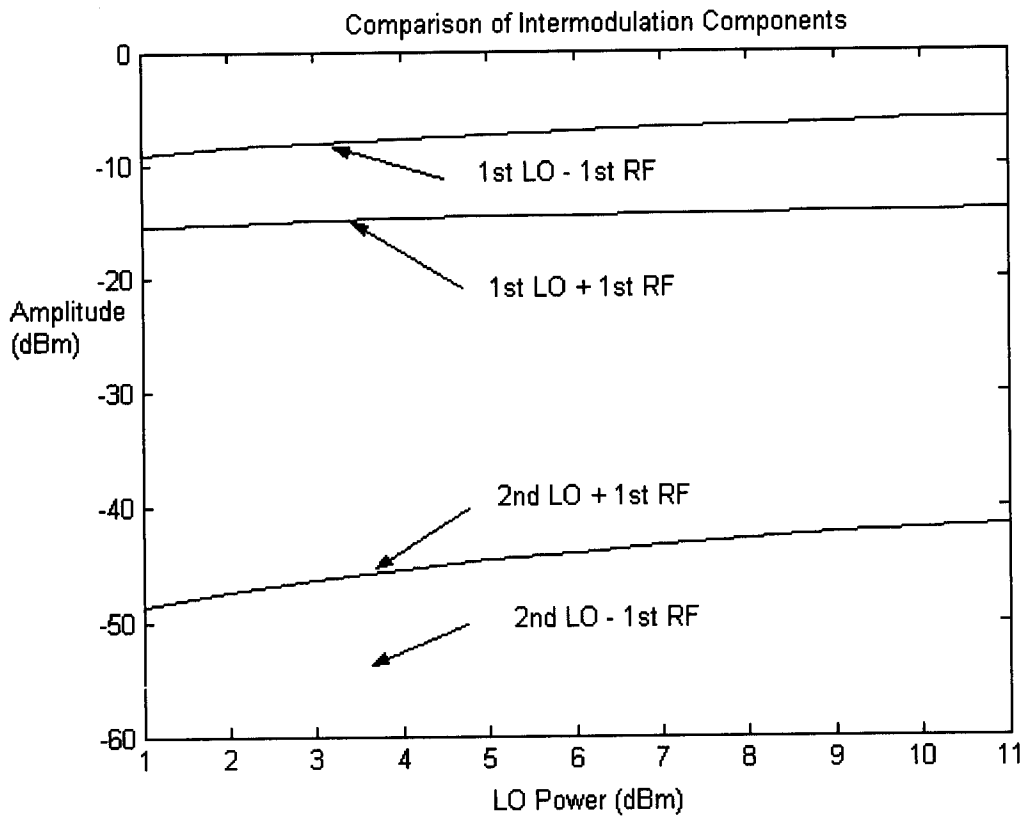
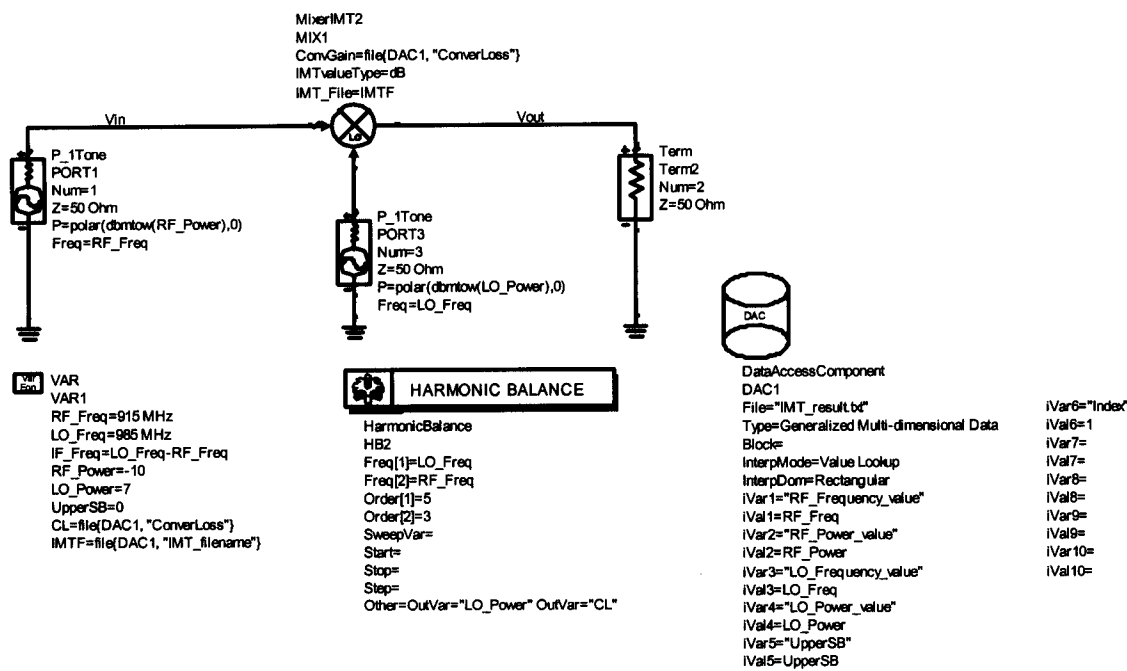


Fig. 11



Stimulus condition	RF Frequency	RF Power	LO Frequency	LO Power
	915 MHz	-10 dBm	985 GHz	7 dBm

Fig. 12

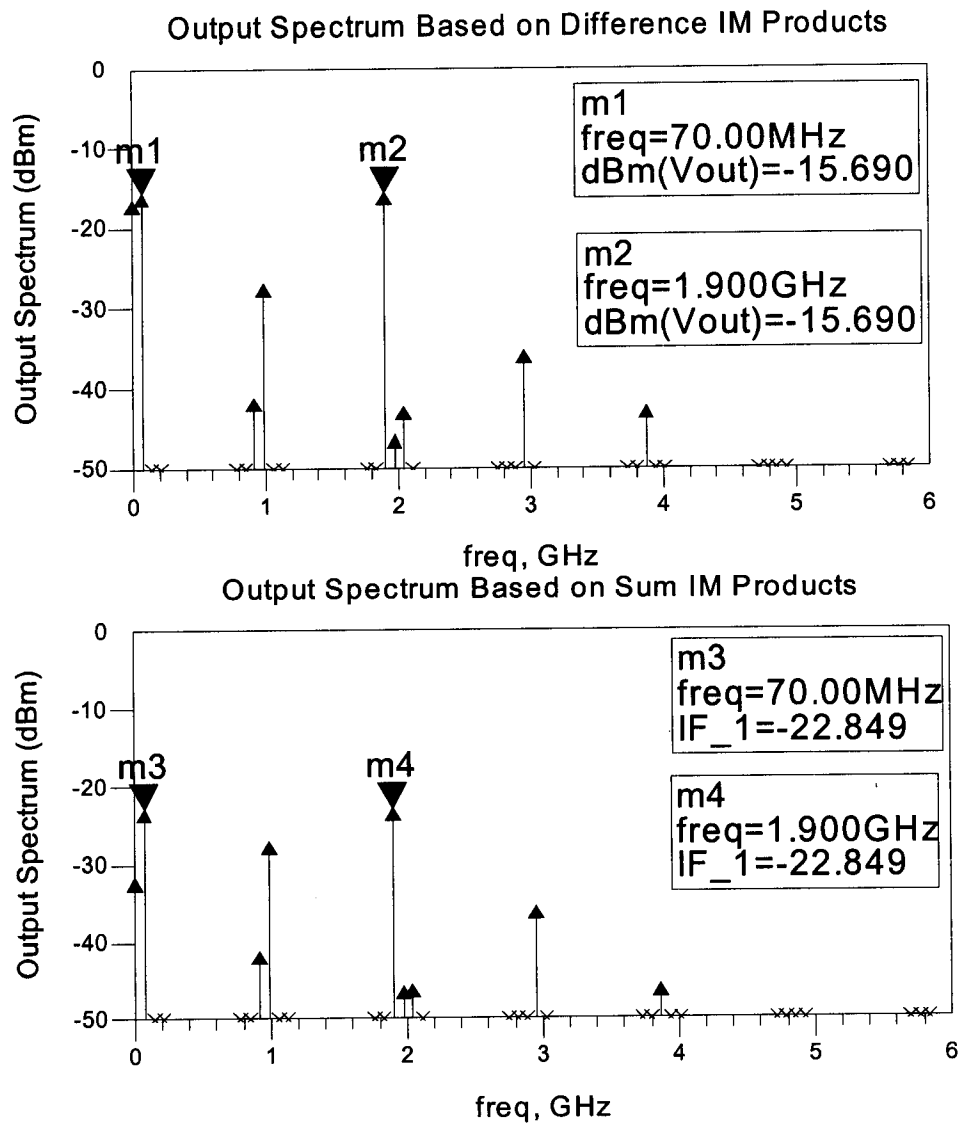
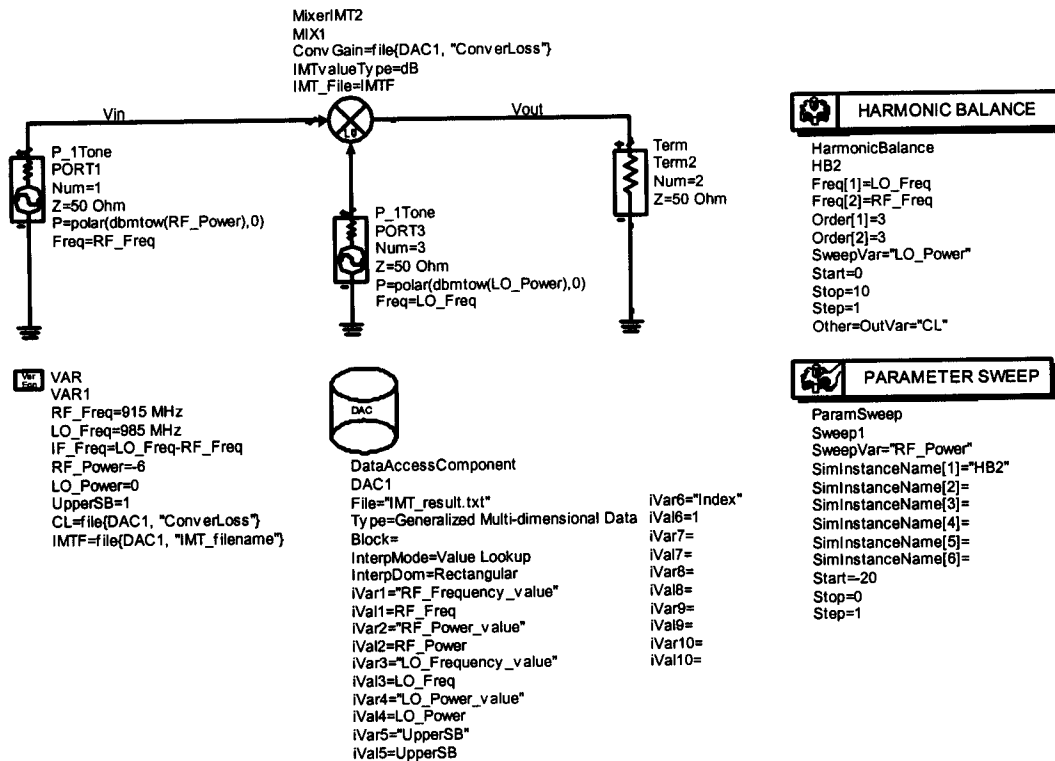


Fig. 13



Stimulus condition	RF Frequency	RF Power	LO Frequency	LO Power
	915 MHz	-20 – 1 dBm	985 GHz	0 – 10 dBm

Fig. 14

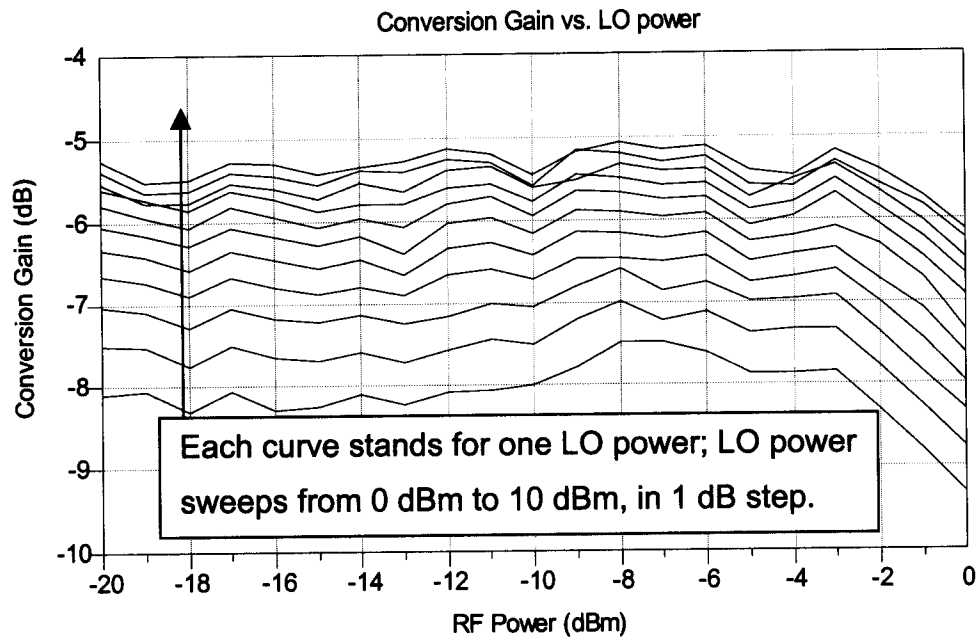


Fig. 15

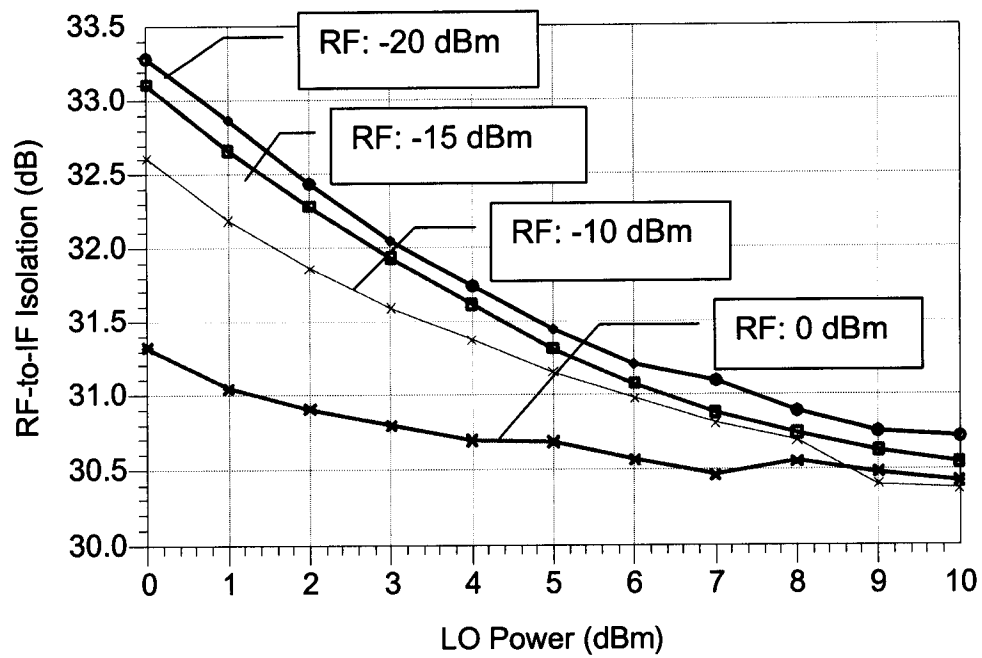


Fig. 16

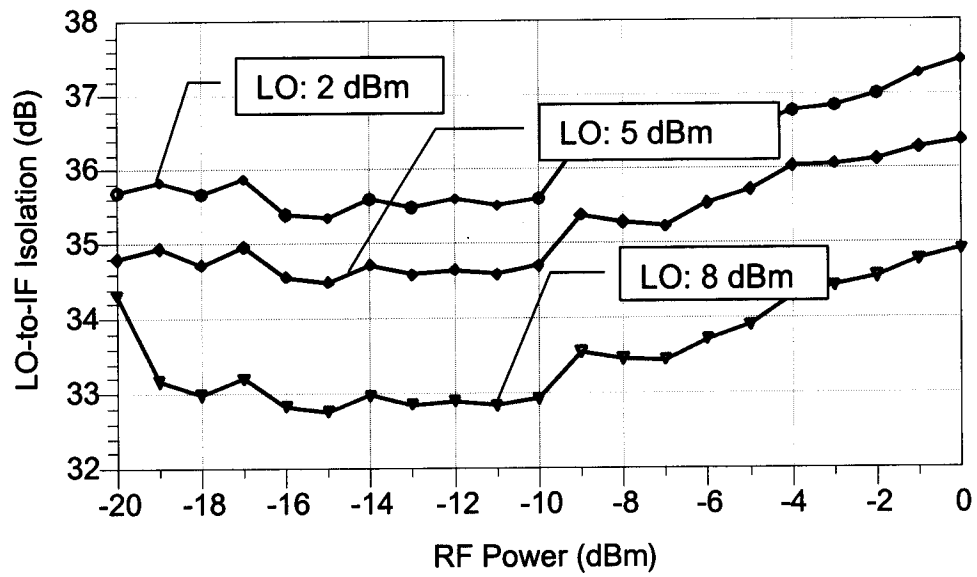
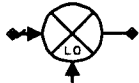


Fig. 17



Mixer

MIX1

SideBand=UPPER

ImageRej=

LO_Rej1=

LO_Rej2=

RF_Rej=

ConvGain=dbpolar(0,0)

S11=polar(0,0)

S22=polar(0,180)

S33=0

PminLO=

NF=

NFmin=

Sopt=

Rn=

Z1=

Z2=

Z3=

GainCompType=LIST

GainCompFreq=

ReferToInput=OUTPUT

SOI=

TOI=

Psat=

GainCompSat=5.0 dB

GainCompPower=

GainComp=1.0 dB

GainCompFile=

ImpNoncausalLength=

ImpMode=

ImpMaxFreq=

ImpDeltaFreq=

ImpMaxOrder=

ImpWindow=

ImpRelTol=

ImpAbsTol=

Fig. 18

```
% File format constructed based on the parameter list of the Mixer model
% S11 S12 S13 S21 S22 S23 S31 S32 S33 Z1 Z2 Z3 S0I T0I GainCompPower GainComp
XXX XXX XXX XXX XXX XXX XXX XXX XXX XXX XXX XXX XXX XXX XXX XXX
```

Fig. 19

